AMENDMENT OF THE CLAIMS

Please amend the claims as follows:

--1. (Currently Amended) A reactor apparatus including a support element adapted to be rotatable about an axis, the support element having a surface, feed means for supplying at least one reactant to the surface of the support element and collector means for collecting product from the surface of the support element, ~~characterised in that~~ wherein the surface includes an undercut trough into which a majority of the at least one reactant is directly supplied by the feed means ~~when the reactor apparatus is in use~~, and ~~in that, upon~~ rotation of the support element tending to cause~~,~~ the at least one reactant to form~~s~~ a generally annular film within the at least one undercut trough and pass~~es~~ therefrom across the surface of the support element.

2. (Previously Presented) A reactor as claimed in claim 1, wherein the axis is substantially parallel to a direction of action of terrestrial gravity.

3. (Previously Presented) A reactor as claimed in claim 1, wherein the axis is inclined with respect to a direction of action of terrestrial gravity.

4. (Previously Presented) A reactor as claimed in claim 1, wherein the axis is substantially perpendicular to a direction of action of terrestrial gravity.

5. (Previously Presented) A reactor as claimed in claim 1, wherein the trough is centrally located in the region of the axis.

6. (Previously Presented) A reactor as claimed in claim 1, wherein the trough is in the form of an annulus.

7. (Previously Presented) A reactor as claimed in claim 1, wherein the trough is centred about the axis.

8. (Previously Presented) A reactor as claimed in claim 1, wherein the trough is not centred on the axis.

9. (Previously Presented) A reactor as claimed in claim 1, wherein a plurality of troughs is provided in the surface.

10. (Previously Presented) A reactor as claimed in claim 9, wherein each trough has associated with it a feed means.

11. (Currently Amended) A reactor as claimed in claim 1, wherein the trough is provided with a matrix which ~~serves to assist~~ tends to cause rotation of reactant in the trough ~~to rotate with the support element when this is rotated~~.

12. (Previously Presented) A reactor as claimed in claim 11, wherein the matrix comprises a fibrous mesh.

14. (Previously Presented) A reactor as claimed in claim 12, wherein the fibrous mesh includes a catalytic material.

15. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means includes a receptacle in the form of a bowl or trough at least partially surrounding the support element.

16. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means includes a deflector positioned about a periphery of the support element, against which product is thrown from an edge region of the surface when the support element is rotating at an appropriate speed.

17. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means is coated or otherwise provided with a catalytic material.

18. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means includes means for heating or cooling product in the collector means to a predetermined temperature.

19. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means is provided with feed means for adding a reactant to product collected therein.

20. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means comprises a wall disposed on a periphery of the support element and extending from the surface.

21. (Previously Presented) A reactor as claimed in claim 20, wherein the collector means further comprises a pitot tube which extends close to the surface in the region of the wall and which serves to remove product from this region when the support element is rotated.

22. (Previously Presented) A reactor as claimed in claim 1, wherein the collector means is adapted at least partially to recycle collected product to the trough as feed reactant.

23. (Previously Presented) A reactor as claimed in claim 1, wherein the trough is coated or otherwise provided with a catalytic material.

24. (Previously Presented) A reactor as claimed in claim 1, including a plurality of support elements.

25. (Previously Presented) A reactor as claimed in claim 24, wherein the plurality of support elements is mounted on a single axis of rotation.

26. (Previously Presented) A reactor as claimed in claim 24, wherein the plurality of support elements is mounted on a plurality of axes of rotation.

27. (Previously Presented) A reactor as claimed in claim 24, wherein product collected from a first support member is used as feed for a second support member.

28. (Previously Presented) A reactor as claimed in claim 24, wherein feed means connected in parallel are used to supply reactant to each support element and in which collector means connected in parallel are used to collect product from each support element.

29. (Previously Presented) A reactor as claimed in claim 27, wherein a processing unit is provided between the collector means of the first support member and the feed means of the second support member.

30. (Previously Presented) A reactor as claimed in claim 29, wherein the processing unit is a pump, an extruder, a heater or a heat exchanger.

31. (Previously Presented) A reactor as claimed in claim 1, wherein the feed means includes means for applying electromagnetic radiation or energy to the reactant.

32. (Previously Presented) A reactor as claimed in claim 1, further including means for applying vibration to the support member.

33. (Previously Presented) A reactor as claimed in claim 1, wherein there is further provided a rotary impeller or fan mounted close to the surface and operable to generate a gaseous flow from a periphery of the surface towards a central region thereof, this flow being counter-current to a flow of reactant on the surface.

34. (New) A reactor apparatus including a support element adapted to be rotatable about an axis, the support element having a surface, feed means for supplying at least one reactant to the surface of the support element and collector means for collecting product from the surface of the support element, wherein the surface includes an undercut trough into which the at least one reactant is directly supplied by the feed means, and in that, upon rotation of the support element, the at least one reactant forms a generally annular film within the at least one undercut trough and passes therefrom across the surface of the support element, further including a plurality of support elements

wherein the plurality of support elements is mounted on a plurality of axes of rotation and

wherein a processing unit is provided between the collector means of the first support member and the feed means of the second support member.

35. (New) A reactor as claimed in claim 34, wherein the processing unit is a pump, an extruder, a heater or a heat exchanger.

36. (New) A reactor apparatus including a support element adapted to be rotatable about an axis, the support element having a surface, feed means for supplying at least one reactant to the surface of the support element and collector means for collecting product from the surface of the support element, wherein the surface includes an undercut trough into which the at least one reactant is directly supplied by the feed means, and in that, upon rotation of the support element, the at least one reactant forms a generally annular film within the at least one undercut trough and passes therefrom across the surface of the support element, wherein there is further provided a rotary impeller mounted close to the surface and operable to generate a gaseous flow from a periphery of the surface towards a central region thereof, this flow being counter-current to a flow of reactant on the surface.

37. (New) A reactor apparatus including a support element adapted to be rotatable about an axis, the support element having generally opposed first and second surfaces, feed means for supplying at least one reactant to the first surface of the support element and collector means for collecting product from the first surface of the support element, wherein there is further provided a rotary impeller mounted close to the first surface and operable to generate a gaseous flow from a periphery of the surface towards a central region thereof, this flow being counter-current to a flow of reactant on the first surface.

38. (New) The reactor apparatus of claim 37, wherein the rotary impeller is a fan.

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